UNITED NATIONS

Convention to Combat Desertification

Distr.
GENERAL

ICCD/COP(4)/AHWG/4/Add.1
23 February 2001

Original: ENGLISH/SPANISH
ENGLISH ONLY

CONFERENCE OF THE PARTIES
Fourth session
Ad Hoc Working Group
Inter-sessional meeting
Bonn, 19 March-6 April 2001
Item 2 (a) of the provisional agenda

SUMMARIES OF REPORTS SUBMITTED BY NORTHERN MEDITERRANEAN AND OTHER AFFECTED COUNTRY PARTIES

Addendum

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GE.01-60585 (E)

I. NORTHERN MEDITERRANEAN AFFECTED COUNTRY PARTIES

GREECE

In the context of the fight against desertification, Greece signed the Desertification Convention on 14 October 1994 and ratified it on 6 March 1997.

Greece's geographical position and variations in climate and biotypes give a special character to the country's flora, fauna and habitats. Greek flora and fauna are among the richest in Europe. Since ancient times, human action has greatly transformed the natural environment in Greece. As a result of over-exploitation of soil, water and vegetation resources, large areas of the country are threatened by desertification.

During the last years, Greece has made a significant effort to protect its natural environment and adopt a sustainable development model. In this context, Greece has signed and ratified all major international conventions on the environment. The country's participation in the European Union as a full member since 1981, resulted in the integration and implementation in the national law of the legislation produced by the Union's competent services. The European Union's policies and strategies for sustainable development and environmental protection are therefore a part of the nation's development policy. Through the Community Support Frameworks and the Cohesion Fund, many actions and measures regarding sustainability and environmental protection have been funded.

National and Regional Planning will play a crucial role in the fight against desertification in the long term, following the recent passing of a new law on planning and sustainable development.

Regarding the institutional measures taken to implement the Desertification Convention, the following are mentioned:

- The ratification of the Convention;
- The establishment of the Greek National Committee to Combat Desertification (GNCCD), its tasks, composition and mode of operation;
- The Committee's activities, which include the preparation of the Greek National Action Plan (GNAP) for Combating Desertification, of a report on drought in Greece, the organization of two international conferences on desertification, and many actions aiming at the public awareness on desertification and its impacts;
- The financial aid provided by the Greek State to developing countries for the implementation of the Convention;
- The preparation of a national action plan to limit emissions of greenhouse gases.

An extensive participatory process took place during the preparation of the provisional national action plan. A large number of scientists were invited and participated in the relevant

work groups; meetings, consultations and exchange of information were a part of the process. Communication with and representation of NGOs was also established.

Following its completion, the provisional GNAP is being presented in public and distributed to ALL stakeholders in order to function as grounds for an extensive dialogue between all parties involved and affected. The outcome of this dialogue will help GNCCD formulate the final edition of the GNAP and push the plan's implementation and incorporation through its official adoption by the government. Local authorities, NGOs and representatives of stakeholders will be asked to participate in preparing Local Action Plans provided for in the GNAP and aiming at its proper implementation. A communication campaign aiming at information dissemination, public awareness and sensitization will be launched as part of the effort to implement the GNAP.

Significant measures have already been taken to help combat desertification, such as:

- The preparation of a National Cadastral Survey, currently under progress;
- Certain measures and actions taken in the sector of the forest resources management, the dealing with forest fires and the effort for reforestation;
- The effort for a rational management of freshwater resources;
- The significant agri-environmental measures under progress in many areas of the country;
- The national and regional plans under preparation;
- Various actions and measures regarding public awareness, capacity-building and education, such as education offered on environmental protection and sustainable management of natural resources, advisory services offered to farmers in relation to erosion and environmental protection, and the significant role played by the environmental NGOs;
- The participation of Greece in international meetings of Annex IV signatories to the Convention.

Regarding measures taken or planned within the framework of the GNAP, the report extensively cites on the following:

(a) General measures to prevent and mitigate desertification, namely:

- Determination of threatened areas;
- Information and awareness of groups involved;
- Implementation and monitoring of the measures to be taken;

- Spatial planning;
- Basic institutional and legislative measures;
- Allocation of financial resources required;
- Selection of pilot areas;
- Restoration of desertified areas;
- Research;
- International cooperation.

(b) Specific measures on certain sectors directly connected to the situation of desertification in Greece, namely:

- Agricultural sector (soil erosion control, conservation of surface water and dealing with drought, implementation of measures);
- Forest sector (protection against illegal land use changes, forest fire control, proper forest management, implementation of measures, research);
- Cattle raising sector (legal, technical, political and educational measures);
- Freshwater resources sector (institutional and irrigation measures, measures regarding urban and industrial water use, measures for increasing water availability, research);
- Social and economic sector (financial, technological, development, demographic, social, legislative, institutional measures, measures on infrastructure and relevant research).

The successful implementation of the GNAP depends mainly on the securing of its funding, the exact amount of which will be assessed in a special study. Sources of finance of the GNAP could be the state budget, EU funding, contributions of groups to be benefited by the measures to be taken and special contributions and donations.

SPAIN

The application of the United Nations Convention to Combat Desertification (CCD) in Spain is part of the country's environmental policy. The major short-term challenges of that policy are the rational use and recovery of the quality of water and its environment, controlling the loss of vegetation cover (through deforestation and forest fires) and productive soil (through erosion and desertification), followed by rehabilitation of the coastline and the reduction and appropriate management of waste, and the conservation and rehabilitation of the great natural heritage.

Spanish environmental policy is determined by the commitment undertaken at the 1992 Rio Conference to implement at national level the drive initiated there for "sustainable development", and by the inclusion of the environment in sectoral policies under the Vth Environmental Community Programme "Towards sustainable development".

This policy is coordinated by the Ministry of the Environment, created in 1996, which combined the activities of different ministerial departments. The Ministry's aim is to implement coherent, effective action at national level on the basis of the broadest possible consensus, through a continuous process of information, participation and public and institutional follow-up action through existing participation channels.

The Ministry of the Environment undertakes a great deal of planning activity at national level with a view to implementing both existing plans and new planning instruments which are being prepared and introduced, many of which are related to the areas referred to in the Convention to Combat Desertification. Taken together, these national plans and sectoral strategies make up the National Sustainable Development Strategy.

Among the strategies to combat desertification in Spain which have preceded the CCD, there is the Project to Combat Desertification in the Mediterranean (the LUCDEME Project), initiated in 1981 following the 1997 United Nations Conference on Desertification in Nairobi, which is currently in effect and run by the General Directorate for Nature Conservation of the Ministry of the Environment. The project is aimed at promoting awareness of desertification and ways of combating it. Since it was launched in 1986, the National Research and Development Plan has played a vital part, undertaking a number of activities aimed at mitigating the effects of desertification and finding solutions to the serious problems which occur in affected regions. Since Spain joined the European Union in 1986, activities to combat desertification have been coordinated with the implementation strategy of the European Union's Structural and Cohesion Funds.

Spain signed the CCD on 14 October 1994 and the instrument of ratification was issued in January 1996. The Convention entered into force in Spain on 26 December 1996.

The National Coordinating Unit (NCU) established in principle to give effect to the Convention is made up of representatives of the Ministry of Foreign Affairs (through the General Directorate for Cultural and Scientific Relations), the Ministry of Education and Science (through the Scientific Research Council) and the Ministry of the Environment (through the General Directorate for Nature Conservation).

The first step in the procedure leading to the elaboration of the National Action Programme (NAP) consisted in the Ministry of the Environment submitting a set of principles to the Advisory Council on the Environment (a consultative body on which all sectors of society are represented). When that step had been successfully completed, a working group was set up, coordinated by the General Directorate for Nature Conservation, for the purpose of preparing a working paper for the National Action Programme (the Draft NAP). This working group consisted of representatives of various departments of the Administration dealing with areas related to desertification and research experts. The Draft NAP has now been prepared and will be submitted for open discussion to the Spanish public.

As provided in the Draft NAP, in order to combat desertification more effectively, a National Committee is being set up for the purpose of implementing the Convention, which will be responsible for preparing, coordinating and implementing the National Action Programme and monitoring developments in the process of desertification in Spain and in the Mediterranean basin. All government departments and sectors directly involved in combating desertification will be represented on the Committee.

The procedure for establishing this National Committee for Combating Desertification was recently initiated and is awaiting approval by Royal Decree after consideration by the Council of Ministers.

The Committee is a joint, participatory and deliberative body incorporating the sectors involved. In practical terms, the Committee will be made up of representatives of the Ministries of the General State Administration, the Autonomous Communities affected by desertification, local government, national technical and research organizations and institutes, agricultural and forestry associations, and environmental non-governmental associations.

These procedures are the first steps towards setting up an institutional framework in Spain for coherent and functional control of desertification.

The NAP has to be developed as part of national environmental and economic and social development planning, since initially most of the activities aimed at combating desertification either have been or are being dealt with and planned by government departments or the different institutions of society.

In the light of a diagnosis of the current situation in Spain, based on an analysis of all the sectoral policies, strategies and plans exerting a positive or negative influence on desertification, it would appear that a considerable number of measures which may be considered related to the struggle against desertification are in fact being implemented in Spain at present, some of which began a long time ago. These are measures which have arisen in a variety of contexts, more or less closely related to specific NAP objectives. The multisectoral character of soil and water resources would explain the current dispersal of activities under a variety of policies, ranging from agriculture and water management to forestry and including from a broader perspective policies related to such areas as rural development, regional development, the environment and others.

It will be possible to combine the NAP and existing strategies insofar as many of the activities related to the struggle against desertification are already part of those strategies. As the NAP develops, the earlier diagnosis will be reviewed in more detail and a definition should be arrived at of the part the NAP itself should play as a catalyst for all measures related to the control of desertification, which are currently included (or in the event are being submitted for inclusion) in sectoral policies and plans. From discussions around the NAP, concrete proposals should emerge to identify and promote complementary synergies and approaches, as well as the recognition and integration of CCD principles in existing environmental and development plans.

The close relationship between the NAP and the Regional Action Programme (RAP) of annex IV, which is currently in preparation, is clearly reflected in the link between transnational

issues identified as more relevant for combating desertification in the northern Mediterranean and the requirements expressed in the NAP in its current state, bearing in mind that the work which is currently being done for the RAP will have a decisive influence on the development of measures planned for the NAP.

As a preliminary to discussions about and approval of the NAP, a document has been prepared on Guidelines of the National Action Programme against Desertification, which is due to be approved in the near future. As soon as discussions have been completed among all the actors involved, the NAP will be approved by the Government.

From an analysis of the state of legislation on the environment and related areas, it would appear that work is currently in progress on the preparation of new standards or the modification of existing ones in sectors most closely linked to the struggle against desertification, which in general offer very favourable prospects for the inclusion of CCD rules and principles. The sectors concerned in particular are agriculture, forestry, water resources and, in a more horizontal sense and closely related to the former sectors, rural development. It is hoped that the debate around the NAP will lead to the identification of concrete measures for the modification of existing standards and the preparation of new ones, either within the framework of changes already under way or in any other form.

In the preparatory stages of the NAP, participation by the bodies and sectors involved will vary according to the stages reached in the procedure. Mention has already been made of participants from existing groups and bodies which have contributed to the NAP, such as the Advisory Council on the Environment, the Working Group on the Preparation of the Draft NAP and the National Committee for Combating Desertification.

The next step, according to CCD principles and the participative methodology followed by the Ministry of the Environment in the preparation of its strategic documents, once the Draft NAP and NAP Guidelines have been approved by the Ministry of the Environment and the National Committee, will be to submit the Draft NAP to broad consultation and debate, in which all the institutions involved will have the opportunity to take part, including the General State Administration, the Autonomous Communities and local government, as well as representatives of the sectors of civil society involved.

The process of consultation and debate which will be initiated has been structured on the basis of organizing a series of sectoral seminars and working groups. Apart from representatives of the Administration, these seminars and working groups will be attended by representatives of teaching and research staff, as well as representatives of many social institutions, such as agricultural associations, forestry associations, general business associations, nature protection associations, trade unions, user and consumer associations, the Youth Council, vocational schools, scientific societies, foundations engaged in activities related to desertification, etc.

Once everyone has been consulted, a final programme document will be prepared for approval by the Government. Then the follow-up of the National Action Programme will be left to the National Committee for Combating Desertification.

During the stage of public debate of the NAP, the intention is to publish the Draft on the Internet, as part of a desertification Web page that is currently being prepared, so as to offer people the possibility of sending in suggestions and proposals to an electronic mailbox. The lines of action proposed in the NAP include a strategy of public participation and awareness, which will contribute to the success of the NAP in two main ways: firstly the description and promotion of the Spanish sector linked to desertification, in order to provide a framework for the development and projection of existing technologies and their application; and secondly an information drive to make public opinion aware of the importance and magnitude of this problem, based on the dissemination of true and accurate information. These steps should encourage the development of attitudes and states of mind propitious to the control of desertification.

As stated in the Draft, the NAP in the part dedicated to proposals for action introduces the main national policy measures for combating desertification, which are: identifying areas where action is required, coordinating policies and identifying lines of action specifically suited to combating desertification.

The aim of determining areas for action by applying territorial indicators to each of the characteristics of desertification in the Mediterranean referred to in annex IV will be to identify the physical and socio-economic areas where desertification policy will be applied.

The coordination of policies will be a key item of the National Action Programme. Since desertification is a multi-sectoral and multidisciplinary phenomenon, requiring integrated solutions, such coordination is essential if the right solutions are to be found, ensuring the harmonization of different interests, i.e. overcoming any conflicts arising in the territories concerned. As a starting point, the Draft NAP has included a preliminary identification of actions to be developed as part of an integrated strategy for combating desertification, structured according to major areas of action and general objectives to be achieved, in line with the types of priority action referred to in article 6 of annex IV of the CCD. This set of actions should serve as a basis for discussions, in the course of which the list of actions may be analysed, gaps detected, implementation possibilities considered, etc.

With regard to the allocation of national budgets in support of the implementation of the Convention, the Draft NAP establishes that the basic economic principle for all sectors called upon to implement the NAP will be the need to redirect public and private budgets to achieve NAP objectives.

Lastly, the NAP measures will include the establishment of a working group, whose objective will be to define and apply physical, biological and socio-economic indicators of desertification, suitable for meeting the planned requirements, including particularly the need to evaluate the effects of applying NAP measures. The set of indicators should fit within the framework of the National System of Environmental Indicators, as part of an ongoing effort in Spain to adapt to the DPSIR model (Driving forces-Pressures-State-Impacts-Response), which has recently been adopted by a number of organizations such as the OECD, the United Nations Commission on Sustainable Development and the European Environment Agency.

TURKEY

The United Nations Convention to Combat Desertification was adopted in Paris on 17 June 1994 and opened for signature there on 14-15 October 1994. The Convention was signed in 1994 in Paris by our Minister, was approved in November 1996 by the Environment Commission of the Turkish Parliament and was included in the agenda of the General Assembly for ratifying. This Convention was assented with law number: 4340 on 11 February 1998 in the Turkish Parliament. It was published on official journal which number is 23258 on 14 February 1998.

The objectives of this Convention is to combat desertification and mitigate effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective actions at all levels, supported by international cooperation and partnership arrangements, in the framework of and integrated approach which is consistent with Agenda 21, with a view to contribution to the achievement of sustainable development in affected areas.

As you already know, Turkey has an important location. It is like a bridge between East and West, both culturally and geographically. Turkey gives importance to the implementation of this Convention both on a national and on a regional basis.

Turkey, being a member State of the Regional Implementation Annex for the North Mediterranean Countries (RIANMC - Spain, Greece, Portugal, Italy), has been participating in Regional Action Programme (RAP) studies.

Turkey is at the crossroads linking Asia, Europe and Africa, with 97 per cent of its total area (777,971 km^2) situated in Asia. The Dardanelles and Bosporus straits extend from Europe to Asia and create a natural connection between the basins of the Mediterranean and Black Seas. The country is surrounded by four seas and has a coastline of 8,333 km. The Aegean and Mediterranean shorelines together exceed 4,500 km while the Black Sea coast stretches 1,700 km and is shared with Bulgaria, Romania, Georgia, Ukraine and Russia. The Sea of Marmara constitutes the remainder of Turkey's coastal area.

The geological structure, topography, climate, wildlife, and plant cover are diverse and the country can be divided into four coastal units (the Black, Marmara, Aegean, and Mediterranean Seas) and three mountainous areas. Nearly 63 per cent of the land has slopes steeper than 15 per cent in average, even in the coastal areas. Average altitude is 1,132 m and only 10 per cent of the country is less than 250 m above sea level. High mountains are concentrated in central and eastern Anatolia. Earthquakes, some quite powerful, occur mostly along the north Anatolian fault that runs from the Dardanelles Strait through the Eastern Black Sea Mountains, paralleling the Black Sea coast.

Climate affects erosion by rainfall, temperature and wind. The most important of them is rainfall. The structure, quantity and magnitude of rainfall affects erosion in different ways. If there is severe rain for long periods of time, the erosion rate will increase accordingly. The highly varied climate can be harsh (dry or cold), as in central, east and south-east Anatolia. Average annual temperatures can vary from 4-18° C in the central region to 18-20° C on the

southern coast. The climate is both temperate, with rain year-round, and subtropical, where summers are dry. Average annual precipitation is 770 mm, and may rise to 2,300 mm in Rize and drop to 326 mm in Kırşehir.

Overall, the country is well-endowed with natural resources, such as lignite, coal, iron, copper, chrome, magnesite, boron, and salt, and more modest amounts of oil and natural gas. Although somewhat unevenly distributed, water is plentiful and offers a ready supply for drinking, irrigation, industrial development, and hydropower generation. Forests cover about 26 per cent of the landmass, but over half the area is degraded and unproductive. Finally, because the country is surrounded by water, fish supplies are diverse, but only 10 per cent have economic value and catches are modest. The mountainous terrain restricts agricultural development; only 24 per cent of the surface area is suitable, and nearly three-quarters of it is prone to erosion. A fourth of the land is suitable for agriculture.

Integration of environmental issues in development is sustained through Five-Year Development Plans and Annual Programs, which are prepared by State Planning Organization. The Five-Year Development Plans, the amendment of all kinds of legislation, that distort the compatibility between economic development and environmental protection, and that detain and reduce the impacts of measures are claimed.

In this context, for an effective environmental management, National Environmental Action Plan (NEAP) has been prepared. In addition to Development Plan, the NEAP provides a national environmental strategy while indicating Turkey's environmental outlook at upcoming regional and international arena. Broadly speaking, NEAP has four separate goals, improving the quality of life for all involved, enabling total awareness on environmental issues, formation of a management system which involves design, implementation, financing, monitoring, supervision and information technology and finally economical, social and cultural development for all living and their environments.

As endorsed by the United Nations Conference on Environment and Development, Agenda 21 constitutes an unprecedented commitment by international community to an integrated framework of shared values, objectives, priorities and actions. It also signifies "the beginning of a new global partnership for sustainable development". As a response to obligations of the Agenda 21, a National Agenda 21 is to be prepared which is now being drafted. National Agenda 21 points out important problematic areas in Turkey and gives the full responsibility for their resolution to the central government. Also, further progress is to be achieved by way of preparing and implementing Local Agenda 21s.

The Local Agenda 21 process entails the building of, and reaches a consensus on, a "sustainable community" vision, encompassing long-term, mid-term and short-term goals, and the subsequent preparation of local action plans. Local Agenda 21 formations are carried out by IULA-EMME and are supported by UNDP. Though these studies are at the national level, there will be obligations at the global level.

As requested by the UNCCD, National Action Programme preparations are under way. The NAP will be overviewing the past practices, a sanction in enforcing the realization of the

principles of UNCCD and will work towards the integration of new principles into the policy, with special regard to desertification and drought to enable coordination and harmonization. As NAP is not completed, it still does not have a legal status.

II. OTHER AFFECTED COUNTRY PARTIES

ARMENIA

The natural and climatic conditions in the Armenian plateau have been formed 10-2,000 years ago. The Armenians who populated existing territory since the ninth to the sixth centuries BC have been involved in agriculture and cattle-breeding. A distinctly continental climate, aridity of the area, fragmentation of the relief have been forcing the population to fight for the conservation of land resources, to build irrigation and drying systems, to terrace steep slopes in order to prevent land removal, erosion processes and, finally, desertification.

In Armenia, which covers an area of 2,974.3 thousand ha, the following natural soil zones are represented: semi-desert (236 thousand ha), dry steppe (242 thousand ha), steppe (797 thousand ha), forest (712 thousand ha) and highland meadow (629 thousand ha), and the rest of the lands of 358.3 ha are represented by mother ores and water surface. The agricultural holdings amount to 46.8 per cent, forests - i 1.2 per cent, the rest - 42 per cent.

The major part of the republic's territory is, to a different extent, undergoing desertification processes. However, almost 50 per cent of the lands in the republic are eroded, some 60 per cent of the territory undergo landslide, mudflow and other exogenous processes and some 40 per cent of lands are represented by stony soils, while saline soils amount to 30 thousand ha of lands amount to 30.0 thousand ha.

Land privatization has been started in the republic since 1991 at the decision of the Supreme Council of Armenia. It has been substantially accomplished in 1994. Starting from 1993 the Ministry of Nature Protection of Armenia participated in the United Nations Inter-State Committee on Development of the Convention to Combat Desertification. The Convention has been signed on behalf of Armenia on 14 October 1994 in Paris and ratified by the National Assembly (Parliament) of Armenia on 2 July 1997. Since 9 September 1997 Armenia is a Party to the Convention.

Pursuant to the Agenda 21, where one of major obligation is the creation of legislative and legal principles for sustainable development, and during the period since independence of Armenia (1991) and change of management system of the whole economic mechanism due to transition to a market economy, a radical review of the whole complex of legislative and legal mechanisms was required.

According to the current RoA Constitution adopted in 1995 the State ensures environmental protection, reproduction and wise use of natural resources.

All the State and sector programmes in Armenia are developed with regard to environmental concerns and rational use of natural resources. All these works are substantially

related to the desertification problems and land conservation as the major natural resource. The actions taken are designed with regard to compliance with the republic's obligations on implementation of the United Nations Convention to Combat Desertification.

Concrete plans and strategies for desertification problems failed to be developed in the republic except for the Cabinet Decision of 7 October 1998 "On Approval of List of Measures for Meeting the Obligations of the Republic of Armenia Proceeding from the United Nations Convention to Combat Desertification". However, actions on creation of irrigation and drainage systems, forest-protection belts, rehabilitation of saline soils and degraded lands (reclamation) carried out in the country before the 1990s lacked a comprehensive approach to resolution of desertification-related issues.

A National Action Programme (NAP) to Combat Desertification in Armenia is presently being formulated. After the ratification of the Convention the RoA Cabinet by its Decision No. 124 has assigned that:

- The responsibility for meeting obligations undertaken by the Republic of Armenia under the United Nations Convention to Combat Desertification has been entrusted to the Ministry of Nature Protection;

- The Ministry of Nature Protection jointly with the stakeholder ministries and agencies would submit to the RoA Cabinet recommendations on actions for implementation of obligations undertaken by the Republic.

On 7 October 1998 the RoA Cabinet has adopted Decision No. 620 "On Approval of the List of Measures for Meeting the Obligations of the Republic of Armenia Proceeding from the United Nations Convention to Combat Desertification". According to this decision a Coordination Commission - National Focal Point (NFP) to Combat Desertification has been instituted by Order No. 193 signed by the Minister of Nature Protection on 12 December 1998. Twenty-eight persons, including 11 female, are included in the Commission. The Statute of the Commission has been agreed with all the members of the Coordination Commission and approved by Order No. 31 of 25 March 1999 signed by the Minister of Nature Protection.

In accordance with its status the Commission is a consultative and advisory body, which arranges and coordinates development and implementation of programmes proceeding from the RoA obligations under the Convention. The Commission has no independent budget and financial capacity. The following social and economic sectors related to the issues of combating desertification and its consequences are represented in the Commission: nature conservation, agriculture, urban development, social security, economics and finances, justice, education and science, hydrometeorology, geology. Besides, representatives from such structures as the Ministry for Territorial Planning, State Emergency Administration, Ministry of Foreign Affairs, etc. are involved in the Commission.

The Commission has a developed and approved action plan for 1999-2000. The activities are carried out in the following areas:

- Improvement of legislative and normative documentation;

- Elaboration of strategic issues for combating desertification;

- Elaboration of international and scientific technical cooperation issues;

- Administrative arrangements for National Action Programme;

- Improvement of the role of non-governmental organizations and involvement of broader public in the preparation and implementation of combating desertification, particularly women, youth and students.

No specialized information network is currently available for the Commission. Preparation of NAP would lead to solving the issue of set-up, running and use of database. Existing sector databases related to desertification problems are fragmented, not duly systematized and practically difficult to be used. Data for the preparation of NAP are presently collected and concentrated at the Lands Conservation Division at the Ministry of Nature Protection.

While preparing the NAP to combat desertification in Armenia all the environmental conventions and projects implemented in the country are being taken into account. This would allow to exclude overlapping and uncoordinated actions. Under structural changes of land relations and introduction of new forms of land ownership preparation of the NAP acquires a particular urgency in terms of natural resources conservation and use.

The principles of the United Nations Convention to Combat Desertification are recognized and integrated in the projects for Food Procurement in Armenia, Water Sector Development in Armenia, Forestry Sector Development in Armenia, etc. where "Environmental Protection" is represented in a special chapter stipulating also environmental limitations. For neighbouring Georgia, Azerbaijan, Iran and Turkey actions to combat desertification envisaged within the framework of NAP preparation would be of great significance in regional aspect.

A preliminary analysis of environmental legislation within the NAP framework identified a necessity for changes and addenda to the exiting legislative, standard and legal instruments, which envisage land holding/land use system reformation, natural resources management, raising of responsibility and concern of local population in regard of land conservation.

Improvement of legislation in the field of land conservation is directed to toughening of existing enforcement measures and to stimulation of implementation of obligatory measures for conservation of land resources by population using economic mechanisms. The NAP framework stipulates legislative instruments to be elaborated or modified.

Pursuant to the RoA Cabinet's decision Cabinet Decision (No. 124 of 2 March 1998) by which the Ministry of Nature Protection was appointed as responsible for implementation of the Convention and further to the Programme for meeting the RoA obligations under the UNCCD (Cabinet Decision No. 620 of 17 October 1998), the Ministry has been carrying out negotiations

with different institutions and international organizations for implementation of the Convention in the RoA. In particular, NAP preparation in the RoA has been negotiated with UNCCD, UNEP, UNSO/UNDP and the UNDP Office in Armenia.

Pursuant to the Memorandum on Understanding between the RoA Cabinet (in the person of the Ministry of Nature Protection) and UNEP, UNEP is rendering consultative and financial support for the NAP preparation. Part of the administrative matters are being arranged by the UNDP Office in Armenia.

Environmental protection is integrated in the Armenia's policies and plans, since all the national and sector programmes are prepared with regard to the measures for conservation and rational use of natural resources.

In institutional aspect it is envisaged to distribute the rights and obligations among the national, regional and local authorities, as well as land resources related organizations both at the national and ministerial levels.

Given the necessity of creation educational, training and scientific basis for combating desertification, proposals have already been prepared and submitted to consideration on introduction of special courses on environmental protection, including land conservation into general, education, specialized and scientific and training programmes.

All the above-mentioned activities are in direct relationship with precise monitoring data characterizing different processes. A special part of the NAP related to informatics and monitoring would envisage strict administrative, legal, technical and functional frames for the activity of different management structures. Initiated land mapping and assessment would serve as foundation for long-term monitoring and would enable to purposefully regulate human activity for conservation of land resources.

The Ministry of Nature Protection and the Ministry of Justice according to the RoA Cabinet Decision No. 620 of 7 October 1998 should prepare and submit a concept for National Special Fund for implementation of actions to combat desertification. The major objective of the Fund is to ensure involvement of local structures into implementation of programmes to combat desertification. The Fund's Statute would stipulate the terms for participation of different partners in management and funding of combating desertification.

There is a hope that difficulties related to the initial phase of works and insufficiency of technical equipment would be resolved with the assistance of international and national organizations.

AZERBAIJAN

Azerbaijan is rich in mineral resources and raw materials. There are oil, gas, non-ferrous and precious metals, construction materials and other mineral resources. Besides, the agricultural sector is well represented in the country. Industrial sector is also sufficiently developed. From the pre-independence period, Azerbaijan inherited from the former Union of Soviet Socialist Republics a lot of negative economic, environmental and social problems. They

are trying to solve these problems in the country. It was evident for the Government of the Azerbaijan Republic that there should be urgent measures undertaken to address the situation of this kind.

In 1998, with the assistance of the World Bank, the first stage of the National Environmental Protection Plan was completed and approved by the Government of the Azerbaijan Republic. This document contains priority projects and plans aimed at the improvement of the environmental situation in Azerbaijan. In this situation the accession of the Azerbaijan Republic to the United Nations Convention to Combat Desertification became a milestone for solving the aforementioned tasks. In this context, preparation of the National Environmental Protection Plan would serve as an important impetus to address a number of environmental, economic and social problems.

At present, the plans to privatize industrial enterprises, agricultural sector and land use in general are gaining momentum. In this relation, environmental problems emerge in addition to economic and social ones. For example, there are problems in rational land use, meaning land utilization without a detriment to the soil fertility. In this regard, it was just in time for Azerbaijan to accede to the UNCCD and to start the preparation of the National Action Plan (NAP) to Combat Desertification.

In view of the above, one of the priority problems is to develop NAP to Combat Desertification and to coordinate it with other relevant governmental plans and programmes in order to achieve synergy and maximum payback and effectiveness. A very cumbersome environmental management system was inherited. Irrespective of the fact that the State Committee for Nature Protection in Azerbaijan was established in 1967, other parallel structures responsible for different resources were also functioning.

For recent four years, a lot of very important legislation acts have been adopted in this country. They are the Land, Water and Forest Codes. Apart from it, the Law on Land Reform was adopted - this law has political, economic and social significance. The privatization of land on the basis of this law has been almost completed. Besides, it should be noted that the analysis of existing environmental legislation acts has shown that some of them are out of date and are not working because they do not correspond to the existing state of affairs. For this reason in 1999 a number of environmental laws were adopted, such as Law on Environmental Safety, Law on Conservation of Soil Fertility, which are very important in the context of the provisions of the Convention to Combat Desertification.

In March 1998, a National Workshop to Raise Public Awareness on problems related to combating desertification was held. Representatives from all stakeholder organizations, institutions and enterprises participated in this Workshop. As a result of the Workshop, an address to the Azerbaijan Republic Government was adopted. The result was very efficient - on 24 April 1998, the President of the Azerbaijan Republic signed the Law on Ratification of United Nations Convention to Combat Desertification (N487-1G).

At present, the State Committee for Ecology and Nature Utilization Control headed by a Deputy Prime-Minister is a coordinator and responsible for the implementation of all environmental conventions. After the Convention had been ratified, its coordinator as well as an

expert commission consisting of representatives of all stakeholder ministries and institutions, and non-governmental organizations (NGOs) were appointed. Besides, one should note that NGOs have also selected one coordinator who is guiding these organizations' efforts and is working in close contact with National Coordination Body (NCB).

As a result of the National Workshop, increased interest in the problems of desertification was noted. Interest has been displayed by different layers of population - ranging from government representatives to scientists, students and different NGOs. It was a result of the extensive coverage of this Workshop by different mass media. Such public feedback and the participants' address to the Government have had a positive result. All the important decisions adopted by the Conferences of the Parties to the UNCCD, its results and the text of the Convention, other important documents were translated and brought to the attention of the general public.

At present, when preparation of the NAP has just been started in Azerbaijan, but a wide range of stockholders has been already identified. They are government institutions, representatives of academia, different environmental and women's non-governmental organizations. It should be noted that representatives of different layers of population, including the increased numbers of women and students, are being involved in the process of the UNCCD implementation.

As it was noted above, Azerbaijan's land resources are subject to different kinds of negative phenomena (erosion, salinization, chemical contamination), which are conditioned by both geo-morphological soil features and human activities and lead to land degradation and further desertification. Considering the fact that a great part of economic potential falls on agricultural and industrial sectors, the Government has always paid a great attention to the state of soil, and has been developing partnership agreements with different international agencies and developed countries. The results of these contacts in the context of support and participation in the NAP remain very low. This state of affairs is influenced by both objective and subjective reasons.

One should note the assistance of the UNDP office in Azerbaijan, which has rendered technical and financial assistance in installing a GIS system.

In the framework of the Caspian Environmental Program (CEP), maps featuring the spread of desertification in the coastal 25-kilometre zone were prepared. This programme is being financed by the World Bank, Tacis program, UNEP and Global Environmental Fund. This year, the Government of Switzerland provided Azerbaijan with financial assistance to start preparation of the NAP. A consultation process on these issues has been started with all stakeholder ministries and institutions as well as with the NGO community.

It should be noted that NCO has cooperated with many international agencies before. This work was especially active during the development of the National Environmental Action Plan, among whose priorities there were some issues directly related to desertification processes. The Government assists in the implementation of the aforementioned problems. In this regard activities of the Agency to Facilitate the Development of Farms (with the support by the World Bank and FAO) should be noted. All the pilot farms that have been established or are being

established make use of modern technologies with due consideration of local traditional expertise and mandatory EIA (in order to prevent irrational land utilization).

One cannot say that at the current stage the role of NGOs is significant in this process, because NGOs unify mainly urban population, scientists, intelligentsia, etc. However, their role in the process of understanding of practical challenges in combating desertification is increasing. The expertise of rural population is invaluable here - this expertise will definitely be used in further work on the NAP.

The Territory of Azerbaijan - which is one of the most ancient places of emergence and development of humanity and agriculture - has been impacted by human activity. As a result, the desertification process accompanied by erosion and land degradation has been common for ages and intensified in the twentieth century. At present, the area of eroded lands is 3.7 million hectares, including 3 million hectares subject to water erosion, about 0.3 million hectares subject to irrigation erosion, about 0.4 million hectares - to wind erosion. Preliminary and very rough estimates show that the area of heavily eroded and practically degraded land of the agricultural fund comes up to 0.7 million hectares and their normative value is not lower than US$ 1 billion. More than 1.2 million hectares of land are saline, about 30 thousand of hectares of land have been damaged as a result of mining and other technogeneous processes.

For recent five or six years an attitude to environmental problems and related economic and social problems has become more serious. International cooperation has a special role to play. The most effective way of developing international cooperation has been accession to international conventions. For this reason, it is necessary to coordinate the already developed action programmes and specific plans with the NAP to combat desertification in order to achieve synergy.

The following priorities in the framework of development and implementation of the NAP are to be identified:

- To establish a National Database on combating desertification;
- To establish an information system, including a geographical information system on combating desertification;
- To prepare an inventory of all territories subject to desertification processes, to assess those processes and to perform qualitative and quantitative analysis of the existing situation;
- To establish and perform monitoring;
- To organize and implement stationary control methods over the processes of desertification;
- To organize and implement remote methods of control and research of processes leading to desertification;

- To organize and implement control over rational utilization on the basis of EIA under the condition of transition to private land ownership and establishment of many small farms;

- To develop State and regional plans, programmes to undertake anti-erosion, melioration, irrigation, forest rehabilitation measures;

- To develop systems of social and economic mechanisms and measures to encourage rational nature utilization;

- To develop national programmes to rehabilitate occupied territories, as well territories subject to negative environmental pressure as a result of temporary location of refugees and displaced persons;

- To improve and develop necessary legislation and normative acts;

- Public awareness raising on matters of desertification;

- To involve NGOs in activities to combat desertification;

- To cooperate closer with international organizations and to use the experience of developed countries in process of combating desertification;

- To train qualified specialists who will continue the process of combating desertification in the future under the conditions of more negative pressure on the environment.

In the former Soviet Union the Government annually approved the plans of economic and social development, which contained environmental measures. Many of them were directed to combating desertification. They included construction of anti-erosion facilities, planting protective forests, terracing of steep slopes, afforestation of ravines and other unused lands, forest rehabilitation, etc. These activities were funded from the budget. There were no attempts of fund-raising or resource mobilization at the international level. The Swiss Government has allocated funds through the UNCCD secretariat to start activities on the NAP.

It should be noted that there is a Reserve Environmental Fund administered by the Ministry of Finances and the State Committee for Ecology (NCO). This Fund serves to undertake specific environmental activities. The Fund is financed through compensations, fines and payments for environmental pollution. Yet, this Fund has very limited resources. At present the Government directs all funds to the improvement of the situation of refugees and internally displaced (about 1 million people), who live in places with poor conditions. It adds to economic, social and environmental problems.

Under these circumstances, the assistance of donors both international organizations and developed counties would be invaluable. In relation to this, the development of the NAP a

within short time period, and the correct selection of priorities would allow to receive assistance from the aforementioned sources. Such an experience is known to the country. It has reinforced the activity to combat desertification.

At present, there are many requirements in technical cooperation with donors in the areas of awareness raising on modern technologies to combat desertification, training of specialists of needed qualifications, obtaining modern equipment to establish a database and Geographic Information System, obtaining necessary information in Russian language.

For many years, academic institutions and government bodies have been conducting research of the desertification processes and factors causing them. Such institutions as the Institute of Geography, the Institute of Soil Research of the Academy of Sciences, Agro-Environmental Center of the Ministry of Agriculture, as well as the State Committee for Ecology and the State Hydrometeorology Committee have been doing environmental monitoring. At present, a normative act on the establishment and conduct of environmental monitoring has been prepared. Considering the fact that different agencies have been dealing with these issues, it is natural that the information available and approaches are different - i.e. there is no common standard. Different institutions depending on the tasks and goals, have used different methodologies, which need to be unified and brought to a common standard. The situation is the same with information in those agencies.

Under these conditions the aforementioned normative act enables one to unify the system of monitoring in general, and in particular relating to combating desertification.

Azerbaijan has just began developing the NAP, there have already been meetings and consultations concerning these matters with stakeholder ministries and organizations, as well as NGOs, for this reason there are no difficulties in information exchange. It has been planned to publish relevant information materials this year.

The UNCCD implementation process has just started in Azerbaijan, but combat against erosion, soil salinization, chemical contamination has never stopped, and though it has been conducted on a small scale, the extent of practical recultivation of land has increased. It is all happening against the background of global economic and social changes, taking place in the Azerbaijan Republic.

However, it is understood that it is not sufficient for practical solution of desertification problems, which in its turn are related to objective and subjective reasons (war, occupation of 20 per cent of the territory and the disturbance of its environmental balance), the existence of 1 million refugees and displaced persons. Irrespective of all that, it is hoped that thanks to the UNCCD secretariat assistance and guidance the countries' efforts will be put on the right track.

GEORGIA

Georgia, small mountainous country[1] at the eastern coast of the Black Sea, signed the United Nations Convention to Combat Desertification (UNCCD) in 1994. In 1999, the Parliament of Georgia ratified the Convention, and on 21 October 1999, Georgia became a Party to the UNCCD.

From an economic point of view, currently Georgia represents a typical country with an economy in transition and a set of associated problems. Difficulties are exaggerated with the political disturbances; these plagued the country in early 1990s, shortly after it had restored independence, and catastrophic results have not passed away so far.

The country is still in a stage of rapid development of its legislation. Despite the fact that after adoption of the new Constitution in 1995 and more than 300 new laws of which approximately 50 are directly related to the environmental and relevant fields/environmental protection, natural resources management, land use and agricultural practices - today Georgia's environmental legislation is a confusing mixture of laws and especially regulations/sub-laws and technical standards based on heterogeneous legislative and judicial provisions adopted on the one hand from the legislation of the western countries - especially that of the European Union, and on the other hand from former Soviet legislation. This is one of the main obstacles on the way to integrated sustainable strategy and policy development, implementation and enforcement in Georgia.

Presently, the economy of the country is in such a state, that it is not realistic to expect comprehensive problem solving environmental national investment programs. At the same time, the environmental problems are so huge, that foreign support, as well as domestic investment possibilities, can only stimulate and facilitate a process of economic and institutional reforms. In connection with this it is very important to identify priority directions of the environmental (including desertification issues) institutional and legal system at the early stage of the development. These priorities will be directly related to the sectors of national economy and environment.

At present, the state is poor and the environment is not as valued as it should be. It is difficult to get funds from the state budget for environmental and sustainable natural resources management purposes. There are no central environmental or nature conservation funds, neither on the national nor on the regional and municipal levels. Complete perception of the specific situation in Georgia is necessary in order to work out and implement realistic policies that warrant sustainable development strategy of the country.

The main policy document in Georgia determining the country development strategy in the short term (one year) is "the Indicative Plan for Social and Economic Development", produced annually by the Ministry of Economy. The Indicative Plan for 2000 includes implementation of projects on "Protecting the Soil from Erosion" and "Improving the Soil Fertility" as parts of agricultural sector development programme. However, this document is rather not of the binding character.

The main environmental policy document in Georgia (that should address also problems of desertification) is the National Environmental Action Programme (NEAP), with the 5-year span. The first NEAP, prepared under the auspices of the MENRP, is expected to be approved by the President of Georgia in May 2000. It identifies priority environmental problems in the country and proposes short- and medium-term institutional and regulatory changes and investment actions to address the problems. Numerous ministries, departments, scientific institutions, non-governmental organizations, local and foreign environmental experts contributed to the process of the NEAP development.

Desertification problems are addressed in the section of NEAP devoted to Agricultural Land Use. According to the NEAP "the main environmental problem associated with Georgian agriculture is soil erosion. Soil erosion is caused mainly by poor agricultural practice, such as development of steep slopes; deforestation of mountains; overgrazing; irrigation leading to washing away of topsoil. In recent years practically no means for fighting soil erosion have been deployed since no funds have been available.

Desertification in the eastern part of Georgia has intensified due to overgrazing and climatic changes (reduction of rainfall) in the region. About 3,000 ha has been eroded including Shiraki, Eldari, Iori, Taribana, Natbeuri, Naomari, Ole and Jeiran-chel valleys, the ridges, plateau and the major part of the south slope of Kakheti ridge.

Vast areas are salinated. In particular, 59,200 ha are strongly salinated, while for 54,340 ha salinization is moderate. About 15,000 ha of humus-sulfate soils need reclamation."

To alleviate the problems related to soil erosion and desertification the NEAP proposes to enable investment projects and institutional changes. However, these proposals are rather of a general nature.

Over the last three years Georgia has developed environmental sector specific strategies such as "Initial National Communication under UNFCCC" (includes also draft adaptation strategies for expected changes in climate. Adopted in 1999), "Biodiversity Strategy" (development started in 1997), "Forestry Strategy" (development started at 1998). Yet, no sector-specific strategy or action plan for combating desertification has been developed so far in Georgia. With the support of the UNCCD secretariat, the country is initiating its first NAP now.

The Ministry of Environment and Natural Resources Protection (MENRP) bears the function of the UNCCD National Coordination Body (NCB) in Georgia (not through formal nomination but due to the general allocation of responsibilities on governmental statutory bodies). Presently, the National Focal Point (NFP) to the UNCCD is the staff member of the Ministry of Environment and Natural Resources Protection, working as the Head of the Division of Environmental Policy. Nevertheless, there is an option to shift formal allocation of NCB functions to the State Coordinating Commission to Combat Desertification in Georgia (SCCCDG) - an intersectoral body that is planned to establish; the final decision on the issue will be taken after the initial consultations in framework of the NAP preparation process.

Due to the overall problems in the country's economy and governmental budget the MENRP funding is quite limited. Material resources and means for communication are not adequate too.

In cooperation with governmental as well as scientific establishments and NGOs, with the support of the UNCCD secretariat, NCB and NFP in 1997-1999 undertook several activities on UNCCD and its importance for Georgia. In 1999, the NFP through the assistance provided by the UNDP/UNSO initiated the network of institutions to combat desertification in Georgia. The network consists of 27 different governmental and non-governmental organizations and

academic institutions and is designed to support information and experience exchange between the institutions and to facilitate the decision-making process on policy issues to combat desertification.

Prior to its accession to the UNCCD in 1999, Georgia had developed neither the separate NAP on desertification nor the clear framework for incorporation of desertification-related issues into other general or sector plans. First NAP that Georgia has to develop in 2000 will become the result of improved internal cooperation as well as financial assistance of the UNCCD Secretariat, which allotted funds to assist Georgia in NAP development. On 20 April 2000, first awareness-raising meeting on the upcoming preparation of NAP was held at the MENRP by the initiative of the national Focal Point. About 20 state agencies and scientific institutions attended the meeting. Two days later, the separate meeting was held at the MENRP for NGOs on the same topic.

The NAP will be developed through active involvement of all the stakeholders dealing with the problems of desertification including governmental departments, academic institutions, NGOs, local governmental bodies of the regions threatened or affected by desertification. On the final stage, governmental approval or parliamentary adoption of NAP will be necessary.

In Georgia draft laws and regulations in the field of environmental protection are routinely published and publicly debated. The new Administrative Code of Georgia (1999) boosted the right of public to have an access to any information (except the information containing state or commercial secret) that is possessed by any governmental institution. The ratification of the United Nations Economic Commission for Europe Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters by Georgian Parliament (11 February 2000) made a step further in this direction.

NGOs have been actively involved in the development of various environmental documents. However, the participation of local population is often facing difficulties; local NGOs still lack necessary expertise as well as funding to facilitate the process, while national NGOs mostly didn't manage to develop operational branches outside big towns. Mechanism for effective participation of actors and stakeholders in defining national priorities and participatory process in support of the preparation of the action programme on a whole is not finalized yet. There is no specific document related to a strategy of communication and public awareness on desertification.

Although no special campaign was organized for the desertification issues, the experience of other campaigns demonstrated the way to reach the local population efficiently. Especially the involvement of youth environmental organizations proved to be effective. NGOs have already built the practice of networking on specific sector problems, as well as the mechanisms of nominating and authorizing representatives to certain institutions. These mechanisms will be enacted also in the NAP development process and maintained afterwards.

Local government can be involved through routine governmental channels, as well as through newly emerged (however, still weak) organizations with horizontal linkages (e.g. the Association of Sakrebulos[2]).

It will take significant efforts to keep the level of information exchange with local communities high. First of all, the real understanding and interest to the problem has to be developed locally; practical and pragmatic approaches like, for instance, pilot projects on agricultural practices improvement, could serve as good stimuli for the dissemination of interest in population groups.

There was no commitment taken so far by governments of international partners in regard to involvement in the process of NAP preparation and implementation, because Georgia became a Party to the UNCCD just a few months ago and still has to prepare its first NAP. Nevertheless, the activities of foreign partners in interrelated sectors of Georgian economy (such as biodiversity conservation, land resources management, forestry management, agricultural practice improvement, etc.) indicate the possibility for future expansion of these activities onto desertification-related affairs as well. There is a significant potential for establishment of efficient linkages to the desertification issue within the framework of some ongoing and planned bi- and multilateral projects.

There was no analysis of past experience conducted so far for the evaluation of activities undertaken in the field of combating desertification. Such activities definitely took place in past, including soviet-time measures designed to combat land degradation and erosion. These measures were targeting usually quite narrow objectives (e.g. to comply with certain standards on structural development of certain types of arable lands); their implementation was considered as the responsibility of single governmental structure alone (e.g., Ministry of Agriculture) and, for this reason, only regulatory instruments were usually employed. Not surprisingly, the results of such a policy seemed to be at least mixed and their positive effects (if any), being not supported locally, disappeared as soon as the regulatory framework changed in line with fundamental re-structuring of governance system in the 1990s.

Of course, the summarization and evaluation of that experience needs to apply new approaches, in light of the principles of sustainability. One particular conclusion that could be drawn from past lessons is the following: no single institution is able to carry out measures to combat desertification and land degradation successfully. Only joint and integrated efforts could promote sound measures and achieve their targets. Therefore the significant part of NAP preparation will involve local population and governments in affected regions of country.

Most recent effort to assess some of pressing aspects of the issue was undertaken through the development of the First National Communication of Georgia to the UNFCCC in 1999.[3] Identifying the vulnerability of ecosystems and sectors, the Communication suggests some measures to mitigate adverse effects on country economy and environment that will be considered in NAP drafting process.

In international context, bilateral agreements of Georgia with its neighbouring Armenia and Azerbaijan on the protection of environment include clear provisions on cooperation in regard to "sensitive transboundary ecosystems". Both of agreements emphasize the importance of regional collaboration in joining efforts to solve regional and global environmental problems. Yet there are no special actions and measures taken at the subregional and regional levels. Such activity is envisaged to start along with the NAP implementation process.

Therefore, local capacity-building complemented with the transboundary cooperation whenever feasible, should be considered as a vital element of NAP. With the privatization and land tenure reform approaching the final stage, local governments and populations possess more power in natural resources management; unfortunately, this not always implies that the responsibilities are also recognized and acknowledged.

The process of the NAP development can considerably benefit from "overlapping" activities in bordering sectors of environment protection. Nevertheless, consultation and coordination process between three Conventions (UNCCD, UNFCCC and Convention on Biodiversity Conservation) is not formalized and takes place only occasionally.

As for financing, Georgia has very limited sources of internal funding and - unfortunately - even worse lack of adequate management. Revenues from so-called "ecological" taxes that are imposed on the harmful substances emissions/discharges, fuel retail and natural resources use, should be spent on the environment protection; in practice, it never happens. By the way, these revenues are not negligible at all - even with the low collection rate, last year (1999) these three "ecological" taxes raised in total more than 20 million GEL (more than US$ 10 million).

The Government has not determined specific mechanisms to ensure financing for combating desertification. Moreover, it would be naïve to expect that government will allocate sufficient funds from internal resources to combat desertification, even if it had these funds included in budget (e.g., earmarking the revenues from "ecological taxes") - too often in Georgia budget promises fail to turn into something real.

The use of private funds is problematic for several reasons, including the limited capacity of internal private financial institutions, as well as the issue of an important competitor - nation-wide social priorities (salaries and pensions arrears are very high in state-owned sector).

Local offices of UNDP, WB, TACIS, USAID, etc, as well as bilateral donors (Governments of France, Germany, Netherlands, Norway, UK, others) provide very important source of external special funding for environment; yet their availability for locals (outside big towns) is still low, and requirements for project design are higher than the local capacity in most areas and districts.

The UNCCD secretariat contributed US$ 35,000 for the process of the preparation of first Georgian NAP. Internal sources of the MENRP and other institutions can also be mobilized, but these will almost entirely come as in-kind contribution (space, facilities, etc.) as budgetary funds are extremely limited.

Although information systems on desertification at the national level do not exist, several agencies (e.g. Ministry of Agriculture and Food, State department of Statistics, etc.) collect data that could be used for relevant indicators, if these indicators would in turn exist. The problem is that even the data that was gathered is not properly used. Raw data is of no use for decision-making, and there is no mechanism for data processing to transform it into useful

information. An access to information is also troublesome for main actors, as the data is dispersed and often not communicated to other agencies at all, or subjected to "payments for services".

Again, it is the NAP on combat desertification that should address these issues first time in Georgia. With the assistance of UNCCD secretariat and partner countries, and with the motivation and commitment from the NCB and NFP along with other actors, the NAP is expected not to fail expectations.

ISRAEL

Summary

This is the first report of Israel as an Affected Country Party of the UNCCD. The document is an initial, preliminary attempt to analyse and evaluate past, present and future expressions of desertification and risks of desertification in Israel, to identify problems and to propose approaches for combating desertification in Israel. Thus, this document does not attend the commitments of Israel as a Party to the CCD in assisting Developing Country Parties to combat desertification; this issue is reported in a separate document submitted to the Secretariat of the CCD for presentation in COP4.

Israel is dryland country, with dry sub-humid, semi-arid, arid and hyper-arid drylands covering its area successively along a north-south and west-east descending precipitation gradients. Its dry sub-humid areas are of an eastern Mediterranean eco-climatic nature; the semi-arid area has a strong Asian biotic component, its arid region has a mixture of Mediterranean, Asian and African desert biota, and its hyper-arid areas are of Saharo-Arabian desert conditions. In Israel, the sensitivity to desertification increases with aridity, whereas the exposure to human impact decreases with aridity.

The arid regions of Israel suffered natural soil erosion due to climate change during early historical times, and ancient Negev populations invested commendable terracing efforts to halt this erosion and to develop run-off agriculture there. From the dawn of history nearly all parts of the country have been under intensive land use by humans, including pastoralism and cropping, though evidence for desertification or the lack of it during historical times is not conclusive. During the turn of the nineteenth century and the beginning of the twentieth century exploitation of woody and herbaceous vegetation especially in the dry sub-humid areas, for firewood and due to grazing, caused severe soil erosion and significant degradation of vegetation. Many lowland regions have become waterlogged and salinized. It is not known whether or not semi-arid drylands suffered desertification at that time.

Measures to combat dry sub-humid desertification (afforestation and drainage) and develop semi-arid lands (water resource development) were initiated by Jewish settlers and the British Government prior to the establishment of the State of Israel in 1948. These have intensified as of the establishment of the State until today. Driven by needs to settle the country mainly through agricultural development, extensive afforestation projects apparently arrested soil erosion and promoted the rehabilitation of vegetation and restoration of water-related ecosystem services, mainly in the dry sub-humid regions. Concurrently with afforestation,

exploitation and grazing pressure on the dry sub-humid scrublands have been significantly reduced, with a fast transition of the vegetation to woodland formation, with apparent restoration of water and soil related ecosystem services.

Grazing pressure in the semi-arid regions was reduced as well, and many semi-arid rangelands and rain-fed croplands were transformed into irrigated croplands. The sustainability of this agricultural development and its potential to avert salinization risks in the semi-arid region have been driven by transportation of high-quality irrigation water from dry sub-humid-generated resources. This has been augmented by water conservation measures hinged on the invention and implementation of drip irrigation and fertigation technologies, and by backing of agricultural research and assistance of agricultural extension services. Most dry sub-humid areas, as well as many arid and even hyper-arid areas have benefited from the agricultural experience gained in the semi-arid region and the infrastructure established to support it. By the same token, afforestation practices developed for the dry sub-humid areas have gradually "migrated" to semi-arid and even arid regions. The discovery of geothermal, brackish fossil groundwater in the Negev and the adaptation of conventional greenhouses to growth houses ("protected agriculture") in dry and hot regions of Israeli drylands, provided Israeli farmers with options of intensive cash-crop agriculture and recently also of aquaculture - practices that are economic on land use and hence of little if any desertification impact.

During its first decades, Israeli agriculture development, water resource development, water conservation policies, and afforestation projects seemed to have rehabilitated many previously desertified areas and to have prevented further desertification. However, in recent decades signs of emerging desertification and of future potential risks have been detected. In the dry sub-humid areas these is soil salinization due to irrigation in dry sub-humid valleys, and increasing impenetrability of dry sub-humid woodland and "bush encroachment" leading to degraded range quality on the one hand, and woodland fires leading to soil erosion on the other hand. In the semi-arid areas there are indications of sheet soil erosion on irrigated agricultural land, and of highly intensified galley erosion, both in regions of agricultural activity and of grazing activity. Risk of soil salinization of a large scale may become high due to increasing areas of agriculture irrigated with treated wastewater, which is not desalinated. Similar risk is imminent in arid drylands that are due for further agricultural development to be irrigated with brackish fossil water, though at a smaller scale. Galley erosion is evident also in the arid region, and risk of salinization is imminent in the intensive though patchy agriculture in the hyper-arid areas. Both the arid and the hyper-arid areas suffer from excessive road construction and use, leading to loss of vegetation, soil erosion and loss of water.

Israel has not produced a National Action Plan to Combat Desertification. In recent years it has initiated and completed a National Masterplan for the hyper-arid and part of the semi-arid parts of Israel, and a process of exploring, together with stakeholders and experts, the country's options for sustainable development and modalities for synergizing the joint implementation of the "Rio Conventions." A planning workshop carried out in 1999 within the framework of regional cooperation to combat desertification in the Middle East and utilizing a participatory approach, established a preliminary template for a National Action Plan, with emphasis on research. An intra-governmental Steering Committee on Desertification has been set to coordinate the activities of government departments related to combating desertification, and an advisory professional committee advises the Steering Committee on budget allocation. A list of

urgent activities that may constitute a framework for an Israeli NAP includes actions for assessing, combating and monitoring soil salinization, sheet and galley erosion, and for improving the management of rangeland, woodland fires and road construction and use. Above all it is necessary to increase the awareness of the public and decision makers alike, to the already occurring and to the future damages of desertification. It is also critical now to evaluate the feedbacks between desertification, loss of biodiversity and predicted future impacts of climate change, and to design an effective joint implementation of the UNCCD, the CBD (Convention on Biodiversity) and the UNFCCC (Framework Convention on Climate Change), such that it paves the path for Israel towards sustainable development.

ROMANIA

The accession of Romania to the Convention to Combat Desertification is considered a positive step for the progress of the Romanian economy, conservation of the environmental resources in Romania and integration into international community. Romania has a rich experience in desertification and drought control, reality supported by the achievements acquired in scientific and technical plans, which demonstrates the ability of the Romanian specialists in working out the difficult problems of desertification. Nevertheless, financial resources for transposing into practice the experience accumulated in this field are not available.

The present report emphasizes the need of major and drastic interventions, with extension in the southern, southeastern, eastern and central parts of Romania, in order to obtain real results in desertification control. Consequently, Romania is looking for internal and external (as assistance) financing sources, essential to this action.

Geographical and climatic characteristics of Romania, with special reference to drought processes are shown in Annex 2 of the National Report. Characteristic for Romania's climate is the high frequency of droughts, particularly in the low lands of the South, South-East and East of Romania where the annual mean temperature is between 10.5 and 11.3° C (sometimes 12.5-12.7° C) and rainfall is below 500 mm per year (sometimes 250-300 mm). These climatic parameters worsened during the period 1982-1994, this being the most droughty period from the history of the country.

Regarding desertification, this systemic phenomena is a result of drought, among many others. According to the definition of Convention to Combat Desertification (UNCCD), about 2.2 million ha (10 per cent of country area) situated in the South-East of Romania (East of Muntenia, Dobrogea, and the South of Moldova) and consisting mostly of crop fields and a great surface of humid land in the Danube Delta, have less than 0.65 ratio between precipitation and evapotranspiration.

According to Palfay index (PI of 6….8) used today to characterize the dry regions, a region is considered dry if PI is higher than 6. Moreover, in the range 6….8, PI indicates regions easy affected by drought, where the frequency of dry years is 40-65 per cent. In the regions with PI less than 6 there is a lower frequency of dry years. The zones with PI in the range 6...8 (see the map in the Report) cover 40 per cent of the crop land of Romania, namely in the South, South-East and East of Romania. The regions with the PI in the range 4...6 represent 20 per cent of the crop land of Romania situated not only in the South and South-East of Romania but also in

the West and the Central part of the country. The degradation process of the soil affects more than half of the land at national level (Annex 3 of the Report), and the most seriously degraded soils (surface erosion, deep erosion, landslides, wind erosion) represent about 7.262 million ha (30.6 per cent).

The region with the highest per cent of degraded soil and land slides phenomena is situated in the Moldavian Plateau, Subcarpati (between the valley of Trotus and Olt), Getic Plateau and Transilvanian Plateau, i.e. in the East, South and Central - North-Eastern part of the country.

Wind erosion is occurring in the far North-West of the country (Carei Plain), West (Banat Plain), South (Oltenia and Baragan Plains), South-East (Black Sea shore, Danube Delta) and East (Tecuci Plain). The crop fields under aridization are located in the South-East of Romania, just in the area with wind erosion (Dolj, Olt, Ialomita, Brăila, Galati counties).

The project "Development of rural areas in Romania - The Green Book" funded by PHARE and having as beneficiary the Ministry of Alimentation and Agriculture in Romania, analysed the rural area with the purpose of identifying the village problems and defining a strategy of rural development. The result of the project was preparation of a map on the degree of rural development in Romania, according to certain risk factors, as follows: geographic, demographic, economic, settlement, technical equipment of the localities, social and ecological ones. At the national level this shows that those communities affected by drought and aridization have a lot of difficulties in their development. These zones need large support and quick intervention to avoid implacable deterioration of them.

Taking into account this state of the things, in Romania all actions that try to reduce the effect of drought and aridization are part of the national and sectorial strategies. Chapter III of the Report enumerates briefly national strategies that contain topics related to the objectives of UNCCD:

- Middle-term National Strategy for Economical Development of Romania;
- National Strategy for Sustainable Development;
- National Plan for Agriculture and Rural Development;
- National Action Program for Environmental Protection;
- Draft Strategy for Drought and Desertification Combat.

The common topics of these strategies are referring to:

- Establishment of optimal size and economically efficient exploitation and development of the structural reforms with the purpose of farms consolidation;
- Priority for security against natural disasters and accidents: drought, floods, landslides. In this field it is mentioned the exploitation of existing construction;

- Strategy actions for sustainable management of forests, a finding of the fact that in Romania the consequences of natural disaster and climatic changes take proportions, so that the necessity of forest management under risk becomes clear;

- Sustainable management of water resources according to international rules;

- Building of financial tools for items connected to the environment, to set gradually the EU "aquis" in the area of water, environment protection in industry, agriculture, soil protection and degraded land.

As a first measure of UNCCD implementation is the creation of Romanian National Committee for Desertification. It will be in charge of elaboration of national strategy and projects for desertification combat and drought prevention, updating of the strategy, monitoring and prognosis of soil quality in tie zone subject to desertification, elaboration of project proposals for new law initiatives, identification of financial resources, mediatization of desertification and drought problems to aware the people and international community.

A draft Strategy to combat desertification and drought in Romania in the middle term (2000-2010) has been worked out. It is under the analysis of the institutions and ministries directly concerned and it will be finalized in the second quarter of year 2000. In addition, the actual legislation in Romania, adopted during the last 10 years, refers to aspects of protection and improvement of water and soil resources that, implicitly, tackle elements of combating desertification and soil degradation: Land Law No. 18/1991; Law on Land Reclamation No. 84/1996; Law on Environmental Protection No. 137/1995; Law on Cadastre No. 7/1996; Forestry Code No. 26/1996; Law of Water No. 107/1996; Law on the Reclamation of Degraded Lands by Afforestation No. 107/1999, Governmental Ordinance concerning the Association of Water Users for Irrigations No. 147/1999, Governmental Ordinance concerning the Establishment of the National Company "Land Reclamation" No. 23/2000.

The above legal instruments need to be improved. They must be better connected to each other and must be adapted to EU legislation and international standards.

The main institutions involved in combating desertification, protection and reclamation of degraded lands and drought prevention activities are: Ministry of Waters, Forests and Environmental Protection (MWFEP); research institutes subordinated to MWFEP, oriented on meteorology, hydrology, environmental engineering, forestry, Danube Delta; districtual agencies of environmental protection; Forest National Company; Ministry of Alimentation and Agriculture (MAA); "Gheorghe Ionescu Sisesti" Agriculture and Forestry Academy of Science and its all research institutes; Autonomous Company of Land Improvement; regional specialized institutes subordinated to the Ministry of Alimentation and Agriculture; offices of cadastre and land organization, etc.; NGOs and professional associations (like National Soil Science Society, "Progresul silvic" Society and Romanian Society for Sustainable Development). Local institutions (Forest Branches, district Agencies of Environmental Protection, district offices of Pedological and Agrochemical Studies, Bureau of Cadastre and Land Organization) together with the district branches of National Agency of Agricultural Consultancy (subordinated to the Ministry of Alimentation and Agriculture) and the specialists from Regional Agricultural

Research Stations (subordinated to Agriculture and Forestry Academy of Science) are providing the information to the final users and also they ensure the expertise for combat and mitigation of long lasting drought and aridization phenomena.

Regarding international cooperation (chapter VI of the Report), it is considered that under specific geographical, social and economical conditions of Romania, the actions to combat desertification and drought must be developed together with land reclamation and watershed management (mostly in the hilly and mountains area). Chapter VII of the Report describes the actions that have been taken or will be taken to improve the economic environment, institutional organizations, expertise concerning desertification and monitoring of drought consequences (research, forestry, hydrological reclamation). Evolution of the funds of Ecological Restoration Programme of degraded lands by forestation for the period 2001-2050 is shown in chapter VII. In the structure of the current year budget (2000) the allocated funds rise to $450,000 as funds for degraded land improvement and $5,000,000 for reforestation of degraded lands. Romania will contribute yearly to the SAPARD Program $75,000,000. About 20 per cent of this amount will be allocated to rural communities in the area affected by drought and aridization.

Operative actions are undertaken to monitor and forecast the meteorological and hydrological events as well as the soil quality within the areas affected by desertification and drought. Also, the forests and forestry soils have been monitored since 1990 both within an European and a national survey network (chapter IX).

Notes

[1] Population - 5.5 millions, area - 69,700 km^2, GDP - 609 USD per capita (1999).

[2] "Sakrebulo" (literally - "the assembly") - elective board with local governance power in Georgia.

[3] Prepared by the Center on Climate Research of MENRP, under the assistance of GEF-UNDP.